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{ WELCOME TO SKULE™, F!ROSH. SO TELL US... HOW WAS ORIENTATION? EMAIL CANNON@SKULE.CA }

No talent required!
SN2K Auditions
DETAILS PAGE 7

# the cannon

SEPTEMBER 7, 1999

THE OFFICIAL NEWSPAPER OF THE UNIVERSITY OF TORONTO ENGINEERING SOCIETY --- VOLUME XVII ISSUE I

first in the series
Thresholds
a look at a Faculty poised at the edge of a millenium
DETAILS PAGE 3

*Changing the face of St. George: the architect study of the Centre for Information Technology by Donald Schmitt, A.J. Diamond, Donald Schmitt & Co. (not a rendition of the final site).*

## New Building Gets Green Light

*Development of the 8-storey Centre for Information Technology on Cruise Control*

BY MARCUS LAM – STAFF REPORTER

To all those who think that the hallways are too cramped, computer labs are too full, and lecture rooms are too small – don't worry; new space is on the way. Big new space.

The new 25,000 square meter building, to be named the Centre for Information technology (CIT), is to be located in the area just north of the Koffler Student Center, across from the Galbraith Building on St. George Street. Scheduled to open in September 2001, it will be constructed in the space currently occupied by the Joint Centre for Transportation, the Sex Education Center and the Engineering Science Building; these three buildings will be demolished by the end of this year.

In addition to providing new faculty offices, lecture halls and underground parking spaces, the new facility may also house a more comprehensive PEY office, complete with personal interview rooms. The Engineering Student Recruitment and the Computer Science Undergraduate offices may also relocate to the new building. It will also contain five new information technology (IT) research institutes: Bell Canada University Laboratories, Bell Canada Multimedia Laboratories, Centre for Advanced Coating Technologies, Energenius Centre for Advanced Nanotechnology, and Nortel Institute for Telecommunications Open Research Facility

One of the main objectives of CIT is to bridge the existing gap between IT programs offered by both the Faculty of Arts and Science and the Faculty of Applied Science and Engineering. "The idea of the new building is to bring together IT researchers from all departments across the university," says Professor S.G. Zaky, Chair of Electrical and Computer Engineering (ECE). "This will increase the quality and breadth of all IT related programs."

ECE, Engineering Science, and Computer Science students will directly benefit from the new research facilities and laboratory rooms. Students enrolled in the Mechatronics option under Mechanical Engineering and the Information Engineering stream under Industrial Engineering will also benefit from the new teaching labs. All engineering students will definitely appreciate CIT's new tutorial rooms and lecture halls. "There will be a substantial number of new tutorial and lecture spaces [in the new building]," says Professor J.S. Wallace, Chair of Mechanical and Industrial Engineering. "From the undergrad point of view, that will be the key feature."

The $75-million project is to be funded from a variety of sources – from private/corporate donations to government assistance through capital grants and the Access to Opportunities Program (ATOP). Launched by the Ontario government in 1998, ATOP is designed to encourage universities to double their enrollment in technology programs such as Computer Science and Electrical & Computer Engineering. Under the program, the government will match all donations made by private and corporate investors.

All affected programs under ATOP have been nearing, if not reached, their doubled enrollment objectives with this year's incoming students. Until the completion of the new building, there will be an increasing need to share even more lecture halls with the Faculty of Arts and Science, and to find more office space for new faculty members.

The proposed completion date of September 2001 is quite ambitious. "This is the fastest timeline the university has adopted for any building," says Dr. P.I.P. Boulton, Professor Emeritus of ECE. "Usually, a building of this size

see EngSci page 6

## ROSI Don't Know Jack!

*ROSI's debut less than stellar*

BY IVEY CHIU - STAFF REPORTER

ROSI is the Repository of Student Information, an online internet and telephone system new to the University of Toronto. ROSI made her much awaited debut at noon of March 15th 1999 after several delays. However, engineering students have had a hard time getting to know ROSI due to delays and long waiting periods between the introduction of new services. Spring pre-registration was delayed and there was confusion over the different service offered by ROSI's telephone system, and ROSI's Student Web Service, which was largely non-functional at that point.

After nearly half a year, ROSI still doesn't know her engineering charges very well. Returning students will notice that class rankings are still missing from ROSI's profile of each student. The absence of this number may or may not be a good thing as it measures each student against his or her peers. At the time of this writing, there is also a lack of a personal time-table due to scheduling problems and the inability to self-direct fees using ROSI for the upcoming fall term. However, this is soon to be resolved.

Problems with ROSI crop up due to the differences between the Faculty of Applied Science and Engineering and other faculties, in particular, Faculty of Arts and Science. In order to take advantage of ROSI, each faculty has had to adjust their schedules. There were many problems with converting Engineering final grades into a format that ROSI (or Arts and Science) uses. Whereas Engineering has worked with class rankings and numerical marks, ROSI (or Arts and Science) worked with grade point averages (GPA), course averages and letter grades.

While all those are back-end problems (with how ROSI internally processes data), there is much room for improvement in the user interface and front-end service as well. The menu buttons are not uniform in size, and the menu often scrolls out of reach when reading long listings. This may only be a differing opinion of aesthetics and a minor inconvenience, but it is something that is easily corrected.

see ROSI page 6

*Skule™ Daze proto-frosh gets da beats from Orientation chair Tim Christie (as the Virk looks on)*

Lost your herd?
Not a yellow shirt in sight?
Fear not, F!rosh!
Complete Orientation Week schedule
FREE inside!

# letters & opinions

## the cannon

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PLEASE NOTE
**the cannon** is a medium through which undergraduate engineering students can express their opinions. The views expressed herein are those of the author and do not necessarily represent those of the editors or the Engineering Society unless so indicated.

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## editorial

To *cannon*: a new verb in my vocabulary. We really had fun *cannoning* for the first time, and we're proud to present this Skule™ year's first **Cannon**. It has brought together a great bunch of writers and artists, forced us to look deeper into our Faculty, and allowed us to spend some evenings playing with PageMaker and PhotoShop.

We hope that this issue reflects the excitement that exists in our Faculty these days. We're getting bigger – are we getting better?

A professor once said that there is no such thing as a perfect model. The only way that one can assure a good output, given some input, is to slap on a negative feedback loop. What's the output like? How far is it from the ideal output? How can we use this feedback to make the gap smaller?

Are we an ideal Engineering School? Ha! I'm sure that those clever professors from other universities that recently came to review us didn't think so (the recent phenomenon called the External Review). The students that Paul Leventis interviewed for his White Paper didn't think so either.

We mustn't forget that the powerful part of all this negative feedback loop business is the loop. And it is the *resulting action* happening these days that's exciting. People exist amongst us who continue to do crazy things that bring our Faculty that much closer to that ideal. We're not there yet, but neat stuff happens here.

We want to tell you ALL about them.

Looking forward to a great year,

JEAN

*In memory of*
*Julie Wilkinson*
*a wonderful lady who took better care of us than we deserved.*
*Engineering Society Office Manager 1989-1999*

## Greetings from the President

BY SEAN VOSKAMP – ENGSOC PREZ

I would like to welcome everyone back to Skule™ for another year. I would also like to welcome our new F!rosh and wish them the best of luck in their studies.

However, we start this new year out on a somber note. Julie Wilkinson, the Engineering Society Office Administrator, a lady beyond description, suddenly passed away this summer. We had a memorial service at where many current and former students came by to reminisce about Julie and the fun times we had with her. She will truly be missed. A magnolia tree has been planted by the main entrance of the Sandford Fleming Building in her honour.

We also lost another great friend of the Society this summer. Professor Ted Jones, a man who attended the last 50 GradBalls, a man who gave a lecture every year on dress and decorum, passed away. There are plans for a memorial service early in the Skule™ year.

As you may have already noticed, we have a new Engineering Society Office Administrator. I would like every one to welcome John Wheeler to the Society. Stop in and introduce yourself to him. He comes to us from the real world of big business. He told me a few times when he took the College streetcar he noticed some strange things happening in the engineering area of campus and became interested in engineers. Well John I wish you good luck and good times here.

Looking forward, I hope this is going to be a good year. I don't think we can go wrong. The first class of the new millennium will be graduating and they will be tearing down the Varsity building to build the new Centre for Information Technology. Yes, It should be a good year indeed.

Anyway, it's back to business as usual. For the f!rosh: I encourage you to explore your new Skule™. Stop in EngSoc and let us know what we can do for you. For the veterans: have a great year and we hope to see you at events. ❖

*Sean working the grill at Skule 'Daze 979*

**SIGN-UPS**
**EAA intramural sports**
**SF Atrium**
**first week of Skule™**

# The White Paper

BY DAVE PATMAN – STAFF REPORTER

first in the series
**Thresholds**
a look at a Faculty poised at the edge of a millenium

"The book fascinated him, or more exactly it reassured him. In a sense it told him nothing that was new, but that was part of the attraction. It said what he would have said, if it had been possible for him to set his scattered thoughts in order. ...the best books, he perceived, are those that tell you what you know already."

George Orwell, *Nineteen Eighty-Four*

Broken blackboards that don't slide up and down, rotten professors who can't lecture, useless tutorials... the list goes on.

If you tried, you could probably come up with a list of problems that if fixed would go towards improving the Faculty of Engineering. But how much can one person do? The only method that most of us know about is the seemingly useless Professor Evaluation Form that comes around at the end of each semester - but much impact have your Professor Evaluations had?

Paul Leventis, Executive Faculty Council Representative Chair, decided to do things differently. He placed student complaints and concerns into a format that is being taken seriously.

He wrote a paper on it: Improving the Faculty of Engineering: Problems and Priorities from the Student Perspective.

HISTORY

Paul's position as the Executive Faculty Council Representative made him the right person for the job. The time was right - since the University and the Faculty are putting together their Strategic Plan for the next 5 year period, this would be the right venue for students to suggest changes.

Paul began in February by gathering information from fellow students and professors. He found that most people were happy with the education that they were getting, but things could be better.

Two open meetings for students were held but turnout was low. More success came by asking for input via e-mail. Paul received many comments this way.

THE REPORT

The report addressed six major topics: Professors, Teaching Assistants, Course Content and Structure, Student Recruitment, Facilities, and Graduate Quality

In our phone conversation, Paul made the comment that the contents of his report should be regarded as suggestions "to get the ball rolling" and encourage further discussion and investigation. Not all of the comments are Paul's personal beliefs, and he doesn't necessarily agree with every point. But he sees it the all of the points contained of the report as being reasonable. I would agree that there are no shocking or surprising aspects to the report.

Paul took this report to the heads of the different engineering departments in May, and to the Chairs and Dean at the beginning of August

Also, the some members of the recently completed External Review saw copies of this report. This was not Paul's intention when he started writing the report; the timing of the Faculty review just happened to coincide with the release of the report.

What next? A report like this can be a dangerous thing. It doesn't make the department look good, and could drive away prospective students and funding.

But harm wasn't Paul's intention. Its intention was to say that we (the students) know that there are problems and that they should be addressed. Now I suppose we wait in the hope that these problems will dealt with.

And some improvements have already been made. Paul reports that the report has been "well received" by most readers. Some of the items which have been rectified or are in the process of being dealt with are the repairs to damaged classroom facilities, and an analysis of the hiring practice for undergrad teaching assistants. Over the next couple of months, Paul hopes to see more items in the report being addressed.

Paul suggested that a report such as his could become a yearly responsibility of the Executive Faculty Council Representative Chair, with the student elected to this position becoming a watchdog who would report on what concerns students had to the Dean each year. A yearly report would mean that problems could be dealt with as they occur so that problems wouldn't fester the way they have.

My opinion is that there will be a lot of stalling. Will departments pay to have web sites developed, or will professors take the time to make them themselves? Can the Faculty spare the money to upgrade software and create workspaces for small groups of students? Who will pay for training of professors and T.A.'s? Will professors even admit that they need training? Will they want to spend extra time on training? Will they do it willingly?

It will be our responsibility to stay vigilant and make sure that they do! ❖

---

*The following is a summary of some of the main points of the report. The report will be on-line in the future.*

PROFESSORS & TEACHING ASSISTANTS

- Professors and Teaching Assistants receive little to no teaching training; they should.
- Teaching Assistants need to be educated on marking fairly and consistently, acting in a mature way with students, and how to lecture.
- Teaching Assistants need to be more evenly split throughout departments.

COURSE CONTENT AND STRUCTURE

- Courses should include more skills grads need when entering jobs: administration skills, interview skills, business and personal financial management, and business management skills. These skills can be introduced into the curriculum in the form of quarter-weight courses.
- Class sizes are too big.
- Laboratories should be better integrated into lectures.
- Electronic Support should be created for every course. Handouts, course outline, announcements and marks would be put on-line for every class. Undergrads could assist in this.

STUDENT RECRUITMENT

- Better advertising for students within Canada
- More scholarships with lower values perhaps would make people want to come to U of T as opposed to other schools... don't feel like just another person.
- More personal feel such as personal acceptance letters and phone call. This has been effective in engineering science, and could be extended to other departments.

FACILITIES

- Common areas for students to brainstorm and work on group projects are needed.
- Environmental control needs to be looked at.
- Some blackboards don't slide up and down, and there are damaged chairs. These need to be fixed.

GRADUATE QUALITY

The most serious part of Paul's report is the last section which is entitled "Graduate Quality". This section addresses the problem of cheating on unsupervised course work. This sensitive topic was brought up as a potential problem that needs to be explored further.

In response to this, Dean Charles has formed the "Committee on Unsupervised Term Work" to evaluate the role that unsupervised course work plays in the curriculum. This committee will attempt to ascertain how rampant the cheating problem is, and why it's occurring. It will also provide recommendations on what changes should be made (if any) in order to reduce the amount of copying.

These changes may range from stiffer/more visible penalties to reducing the amount of work assigned, or making assignments more meaningful. The possibility of decriminalizing copying will also be explored. The committee will produce a report by the middle of the Fall term.

# All the Rage

BY CHRIS PERESSOTTI

Hey kids, welcome to the inaugural column of All the Rage, a space where I'm going to rant about everything that annoys me. I know, it *sounds* like a rather narrow focus, but it's actually all-encompassing. *Trust* me.

So, like everybody else, I've waited until the eleventh hour to make my appointment to do the final upgrade of **graduated licensing**. My G2 expires October 11th, so in June I got the earliest possible appointment for a G2 road test: February 14th in the year 2000. Happy Valentine's Day, indeed. I've never really seen the point to the two levels of licensing. For the lucky few who are unfamiliar with the system, it's like this: from your sixteenth birthday onward you can get your G1 which allows you to drive only with an experienced driver, not on major highways, yadda yadda yadda. Take a road test about a year later and you graduate to your G2 license and can drive on your own. This part *does* make sense, as being forced to practice more probably makes you a better driver when you're on your own. The *stupid* part is the upgrade from G2 to a full G license. Why so stupid? Because the *only difference* between having a G2 and a G license is that a G2 allows you to have the legal limit of alcohol in your blood (with a G2 you can't drink at all) and lets you drive with more people in your car than there are seat belts. That's right, a full G lets you drink and drive without having to worry about having enough seatbelts for all. As soon as I pass *my* G2 road test (at a cost of $75.00) I'm going to jump in the air and yell "Yeehaw! Time to get loaded!"

On a lighter note, did anyone catch the **spots-in-a-bagga (muh-muh-muh-milk!)** promotion this summer? It's funny how terrible production, a lame jingle, and awful (unrehearsed) acting created one of the most inspired promotions I've ever seen.

Finally, what was the big deal about **JFK Jr.'s death** this past July? Don't think that I'm being insensitive, just realistic. What had he actually *done* with his life to warrant the barrage of media surrounding his death? He was the son of a famous U.S. president... he was a magazine editor...I guess that that passes for freaking *royalty* in the States (which doesn't explain all of the Canadian media coverage). I know that I (and I'm sure everyone else reading this) could name a few people close to them who have died and deserved at least as much media coverage, but they didn't get it. In most cases, there's an obituary and that's *it*. Basically, I'm trying to say that I think the media belittles our personal tragedies when they expect a nation's pity and grief for such a dubious 'tragedy' as this.

That's All the Rage I have for this Cannon, but there are still many Cannons to come! See ya. ❖

Are you the proud owner of opinions? cannon@skule.ca

# skule™ news

*(Top) University of Toronto solar car, Blue II: Top Rookie Team (Bottom) If only people worked on solar power.*

## U of T Shines at Sunrayce

BY RAYMOND FINGAS – STAFF REPORTER

The University of Toronto solar car, Blue II, finished a respectable 20th of 29 cars in this year's Sunrayce, taking honours as top rookie team. 41 teams entered in total, although many were unable to qualify for the actual race. The University of Missouri at Rolla finished first, and Queen's University finished second.

This was the second car produced by the solar car team, however it was the first one that qualified to race. The first car was not complete, and was damaged during transit. U of T beat out three other rookie teams to place 20th.

The car has been in the works for two years, with design work taking up most of the first year, and two mockups being built in 1998 before construction started on the final car. Important considerations for the team were reliability, weight, aerodynamics and efficiency. One of the major factors affecting efficiency is the driver. A good driver can use half as much energy to go the same distance in the same time as a bad driver. Energy use is very important for a car designed to go at 60 km/h on 1000 watts. Compare this to 1500 watts to operate a normal hair dryer! The solar car was tested up to 110 km/h, although theoretically it can go as high as 180 km/b.

After failing to qualify at the preliminary testing at the GM proving grounds in Michigan in May, the team got back to work and finished all the systems. At the last chance qualifiers right before the race, the car drove 240 km, more than the 200 km required. The car also underwent a rigorous safety inspection that took out teams like the Tokyo Institute of Technology, the top team from Japan's solar competition. The race took ten days to go 2280 km from Washington DC to Orlando, Florida. There, the team showed the car off at Disney World before proceeding home.

U of T's car was noted for being well built and good-looking. It was very aerodynamic, and was the only car to integrate the driver canopy into the chassis. The car didn't break down at all, and suffered only one flat tire. Many teams were plagued by flat tires caused by poor wheel alignment.

Design will soon be starting on a car for the next Sunrayce in 2001. The team is always looking to recruit new people, particularly to work on the electrical systems and to help with the business side of things. The new car will build upon the expertise and knowledge already gained in building two cars. It should be even more competitive and promises to do even better. ❖

*Visit the website at solar.skule.ca or email the team at sunrace@ecf.toronto.edu for more information.*

## Dragon Boating Well Represented at U of T

BY RAYMOND FINGAS – STAFF REPORTER

Dragon boating has its roots in Chinese legends, and has a long and honourable tradition in the east. More recently, this sport has spread and become popular throughout the world. Teams of paddlers compete to see who is strongest and most synchronised, and thus fastest. Several teams from the university have already competed this year, and the Engineering team is fast approaching its races in September.

Five teams represented U of T at the Toronto International Dragon Boat Race Festival, held at Centre Island on June 26 and 27. The competing teams were from the Rotman School of Management, the Faculty of Medicine, the Faculty of Dentistry, University College, the Victoria College Athletic Association and a team from the University of Toronto Dental Alumni Association. They competed against many teams from Toronto, as well as a number of other Canadian and international teams.

Not to be outdone, the Engineering team has been in training for over a month for races in the Great White North Dragon Boat Challenge on September 18th and 19th. Training for dragon boating is a particular challenge. Like all sports, physical fitness and good technique are very important, hut dragon boating also requires very exact synchronisation with the team. Dragon boating requires the precision of ballet along with the strength of boxing.

Last year, the Engineering team put in an excellent performance and placed second in their division at the Challenge. This year the team hopes to do even better and compete in the finals. Money raised at the Challenge goes to support the Canadian Spinal Research Organization. ❖

## Arrr, matey! She floats!

*U of T brings home the 'Most Original' Award*

BY CINDY WONG – STAFF REPORTER

A concrete canoe?!? A *floating* concrete canoe?!? Although we struggled in the beginning – with barely a team, scarcely any money and hardly knowing what-in-the-world we were doing – we pulled through in the end (as engineers always do) to compete in the 1999 National Concrete Canoe Competition with our beautiful Santa Concreta.

After months of worrying whether the Santa Concreta would even be completed on time, we were ecstatic to begin our journey on May 6th. With a canoe dripping of wet paint and a presentation half completed, we anxiously ventured towards Sherbrooke, Québec. Upon our arrival to the motel at four a.m., we were greeted by friendly students from the University of Moncton with BEvERages in their hands. After examining each other's canoes, we all passed out quickly (some out of exhaustion, others...) to rest for the few hours that remained before the first day of competitions.

Immersed in our roles as the Caribbean pirates (our theme), we marched into Parc Blanchard, where most of the competition was held, repeating our cheer: "Arrr"!!!!! We rejoiced with that same snarling roar when our canoe was confirmed to be the lightest one in the official weighing – earning us five bonus points! From there on, doom seemed to befall us. Our improvised comical skit did not impress the judges over the other fancy PowerPoint presentations and our artistic display did not impress the judges as the other formal ones by our competitors. Despite this sequence of events, we were still hopeful for the races.

The first of six races was the women's 600-metre slalom race. As we were getting into our canoe, terror stuck. We noticed that the middle section of our canoe was beginning to buckle and leak! There was no time to repair our canoe before the first race and so, our two female paddlers had to push their knees down against the canoe to oppose the force that tried to tear our baby in half. In spite of the sudden trauma, we were still ablé to finish fourth in this timed race – thanks to our determination...to not sink the boat! Immediately after we crossed the finish line, quick repairs with epoxy and duct tape took place.

Lunchtime was used not for eating, but to bandage our broken canoe. Engineering students from various universities gathered around with materials at hand, ready to help with our repairs. It was a heart-warming scene and quite the spectacle – well, the RDS film crew thought so. By the end of lunch, we had a canoe that was probably composed of more duct tape and epoxy than concrete! Regardless of its appearance, we did go on to finish the rest of the races.

Our trusty canoe held its shape for the two two-person sprint races, but when it had to support four people during the last race, it warped like a piece of wet cardboard. The paddlers for the last race basically had to drag the canoe through the lake as they were half submerged in water themselves! However, we were determined to finish the race, and were met with much applause as we crossed the finish line last.

Engineering students from various universities gathered around with materials at hand, ready to help with our repairs.

Outshone by the incredible craftsmanship and preparation of experienced competitors, we finished sixth out of the seven official teams and received the Originality award (for making a disposable concrete canoe?!?). École de Technologie Supérieure finished in first place with excellent performances in all aspects of the competition while Université Laval and Queen's University followed in second and third respectively.

And so ended the 1999 National Concrete Canoe Competition. We may be disappointed with our performance in the competition, but we are not one bit discouraged. We shall learn from our mistakes and come next year, the U of T concrete canoe team shall be back with a vengeance! Arrr!!! ❖

*For more information on this year's Concrete Canoe Team, email Yuval Grinspun at grinspy@ecf.utoronto.ca*

ENGINEERING STUDENT SOCIETIES COUNCIL · ONTARIO

# ESSCO AGM Report

PAUL GRAHAM – VP EXTERNAL

Last June Waterloo hosted the annual gathering of the Engineering Student Societies Council of Ontario (ESSCO) for their Annual General Meeting (AGM). Although the week preceding the AGM was chaotic, as I was out of town, we did manage to get there early Saturday morning. Our arrival coincided nicely with the Waterloo Campus cops who were responding to a smoke alarm. It appeared as though the outgoing ESSCO exec. were not very proficient at cooking pancakes. Anyway, back to the point... The purpose of this report is to inform you about what decisions were made and how they will affect your life as a student.

The purpose of ESSCO is to act as a communication link between all fourteen Engineering Societies, the PEO (Professional Engineers of Ontario) and CODE (Council of Ontario Deans of Engineering) representing approx. 14,000 undergraduate Engineers in matters of common interest. ESSCO promotes Engineering as an exciting and challenging field to secondary school students and works with industry as well as professional organizations on projects such as creating a student organization within the PEO. Throughout the year, the ESSCO executive meet five times beginning with the ESSCO AGM where the new executive are elected. These meetings are in the form of conferences in which delegates from each member school are sent. Skule™ was represented this past June by Xavier Galvez, Ken McNeil, Philip Beatty and myself. Now, without further ado, here goes a quick run-through of all the workshops.

CONFERENCES: CEC (Canadian Engineering Competition). This conference will be held at Western this year, on the weekend following the OEC (Ontario Engineering Competition). These two competitions fall on the weekends bracketing the national Engineering Week in March. The main topic of discussion was the dates, and how these can cause logistic problems for winners of the OEC, who then proceed to the CEC. This year the OEC is being held at U of T. FYIC (First year Integration Conference) 1999 saw the introduction of a new conference designed solely to educate F!rosh about external affairs. Being an attendant myself, I recognize the value of such a conference and was pleased to see that it was voted to be an official ESSCO conference for the year 2000. McMaster will be hosting the 2000 conference, but after that other schools will bid to hold the conference at their schools.

PEO (PROFESSIONAL ENGINEERS OF ONTARIO) RELATIONS: ESSCO is currently in the implementation stage of their student membership proposal for the PEO. The purpose of this Student membership would be, in part, to make undergraduate Engineering students more aware of the PEO, and of the Eng. title. In return student members would be given benefits. Three people were assigned to a task-force, and will report their findings at CCES '00 CFES (Canadian Federation of Engineering Students)

VP-ONTARIO: The current VP-Ontario is Mike Hermann. He is the liaison between CFES and the Ontario region. The main topic of discussion was what sort of relationship VP-Ontario should have with ESSCO. It was suggested that the position be linked with ESSCO. No conclusions were reached. For more information go to the CFES website at www.cfes.ca.

FEE DISTRIBUTION: Travel costs are a huge concern for some member schools in ESSCO. U of T is fortunate enough to have not only a very large Engineering Society, but also has a very central location. Other schools, such as Lakehead, do not have these advantages, and therefore cannot always attend conferences. It was suggested that other schools share these costs, or subsidise other, less fortunate Eng Socs. On a related note, ESSCO is ttying to get a more professional image, and has taken all alcohol expenditures out of its budget. It has been suggested that this surplus money be put into a fund for transportation.

SPONSORSHIP: Most of the discussion revolved around thinking of aggressively advertising to sponsors on what ESSCO is and who is involved in it. A few ideas were the usual pamphlets and letters to Engineering companies. Non-Engineering companies were also thought of as being potential sponsors - they would benefit as well by advertising to a technical crowd.

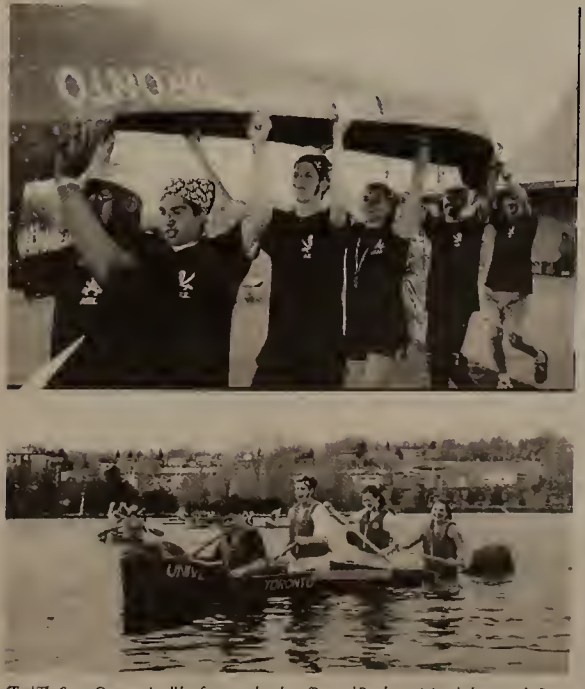
CONSTITUTION: This workshop focused on creating a serious and streamlined constitution. Most of the discussion was on what should be included in the constitution as opposed to the policy manual. For a copy of the current constitution please contact me, or visit the ESSCO website (www.essco.on.ca).

OUTREACH AND ATOP (ACCESS TO OPPORTUNITIES PROGRAM): This workshop focused mainly on ATOP and deregulation. To briefly review: Engineering programs have received $150 million from the provincial government. The government wants these programs to double their enrolment from the 95-96 level. There are many issues surrounding ATOP, and more information can be attained from your VP-Education (vpeducation@essco.on.ca).

GERM (GREAT ENGINEERING RESOURCE MANUAL): GERM is a project that has been the works for a couple of years, however has had a hard time taking off. This is greatly due to the lack of direction that it has. The target audience has been of great debate between a reference manual for High School students or Eng Socs. It was decided that the document should really become two documents. One for High School students, and one for Eng Soc reference.

MUN (MEMORIAL UNIVERSITY OF NEWFOUNDLAND) UPDATE: For those of you who don't know what this is all about let me fill you in. There is currently a supreme court case going on between MUN and the Engineering accrediting board for the Eastern Provinces. The debate is over the usage of the term "Software Engineer" for non-accredited programs. These programs are offered at some schools through the Computer Science department (U of T being one). Graduates of these programs will go on to call themselves Software Engineers, however will not have a P. Eng status. It is feared that this will water down the title of Engineer, and will take away the acceptability that goes with that title. Right now the issue is in limbo until a decision is made in the Supreme Court. This is expected some time in late fall.

That about covers all the workshops at the AGM. At the plenary the only major decision that was made was involving alcohol. It was decided that ESSCO no longer spend money on alcohol, and that for the ESSCO'lympics no "official" event involve the consumption of alcohol. At the end of the plenary various schools made bids for the ESSCO'lympics and next years AGM. Ryerson was awarded the Olympics and Guelph the AGM. For further information please feel free to contact me, your VP-External by e-mail (vpexternal@skule.ca).



*(Top) The Santa Concreta in all her faux-wooden glory. (Bottom) Barely surviving the last race, the Santa Concreta still manages to float. If you look closely, you may see a two-by-four keeping the gunnel from buckling. Look even closer and you'll see the spectacular duct tape job.*

# Announcing the combined B.A.Sc./M.B.A. Program!

BY ANDREA CHARLESWORTH

ECE Chair Professor Safwat Zaky has a lot to smile about these days. In cooperation with U of T's Vice-President and Chief Development Officer, Dr. Jon Dellandrea, Professor Zaky was instrumental in convincing co-founder of eBay and Engineering Alumnus, Jeff Skoll (ELEC 8T7) to donate $7.5 million Cdn to the university. Skoll's generous contribution will be used to fund the newly-created double degree B.A.Sc./M.B.A. program. The Faculty of Applied Science and Engineering and the Joseph L. Rotman School of Management will deliver this new 6-year program to qualified third-year Engineering students. This limited enrolment program, slated to begin in September 2000, will give students an opportunity to graduate with a Bachelor degree in Engineering, a Masters degree in Business Administration and 16 months of PEY experience.

Skoll, who completed his fourth-year thesis under the direction of Professor Zaky, is eager to contribute to a new program in Engineering that will encourage our students to combine technical knowledge with business savvy. Combining an engineering background with a subsequent MBA from Stanford University helped Skoll progress from a computer consultant entrepreneur to Vice-President of Strategic Planning and Analysis at eBay's San Jose, CA headquarters.

The remainder of the gift will establish the Jeff Skoll Wing in the new Centre for Information Technology building, as well as three new endowed chairs, two in ECE and one in the School of Management.

## Wanna go to WONDERLAND?

(Brought to you by your Social Committee)

Saturday September 25, 1999

$25/person (includes transportation and park admission)

The bus will pick up people in front of SF on Saturday morning and bring them back to SF Saturday evening. Tickets will be on sale the first two weeks of Sept in the SF cafe.

# U of T Cyborgs Work on Electronic News Gathering for F!rosh Week

BY ERIC MONCRIEFF

A first in Electronic News Gathering is occurring at F!rosh Week here at the Engineering Skule™ in the form of the cyborgs research group, led by Professor Steve Mann. As an experiment in collective, collaborative, interactive media, we will be transmitting live audio and visual records of F!rosh events to the Internet, where users from all over the globe will be able to keep track of them.

This ability is enabled by the invention of the Wearable Computer, or WearComp, which presents an immersive, constant, and private view of the world to the user. As these computers get closer to the body, they begin to act as extensions of the soul of the user; he or she takes the hardware deep into their personal space, and incorporates it into a larger being. These cyborgs are then able to communicate with one another without wires instantly through the Internet.

The WearComp changes the perceptions of the user by altering the visual input to his or her system. Instead of looking directly at the world, a camera and computer is placed in the input stream. In this way, the life and events observed can be easily recorded and ordered, and massaged into any form the user wants. A mirror is placed in front of the eye of the wearer in order to redirect light into the camera. The display is then projected into the user's eye. Therefore, the eye functions as the camera and the pictures produced are exactly what the user would otherwise see.

These technologies come together seamlessly for the collection and dissemination of news and information, and we will test the ideas at F!rosh Week. Several cyborgs, carrying computers, batteries, cameras, microphones, and radios will wander with the F!rosh leaders, gathering footage as they see it, and transmitting it back to the web server, where it will be immediately available for Internet viewers.

The project's website is at http://www.eyetap.org/engwear, and the F!rosh events will be occurring September 7th through 12th. ❖

# U of T Gets WISE

BY RAYMOND FINGAS – STAFF REPORTER

There is a new student group at St. George Campus this fall. WISE U of T, representing the Women in Science and Engineering, is here, and getting ready to make some noise this fall.

WISE is a larger organization, with professional and student branches across Canada. All of the chapters aim to advance women in science and engineering, fields where males used to have a vast majority. This is not a bra-burning, militant organization out to make life hell for all guys. Instead, WISE has three goals: encouraging women to pursue careers in science and engineering, providing support between these women and holding events to help women network and learn and share knowledge and opportunities. WISE hopes to encourage young women to speak up, be heard and pursue their studies and careers in science and engineering.

WISE U of T is the new student chapter to meet the needs of women in the student body here. WISE U of T replaces the old Women in Engineering Association, but it also does more. By representing women in both engineering and the Faculty of Arts and Science, WISE U of T will be able to organize more events and form a broader network to interest, challenge and support the sisters in physics lectures, design labs and chemistry tutorials.

WISE U of T will be launching a series of events this year. The first is a self-defense workshop near the end of September. Also in the works are opportunities to meet and learn from successful woman in the real world, tours of industry, resume clinics and some good fun times like movie nights. Keep your eyes and senses tuned and be prepared for an enjoyable and broadening experience.

Everyone is welcome to join, female and male alike. Although WISE is aimed for the sisters, gentlemen are welcome to lend a hand or voice an opinion. Check out the wise website at www.ecf.toronto.edu/~wise or email wise@ecf.toronto.edu to learn more. ❖

# ROSI: Clumsy Steps in the Right Direction

continued from page 1

More importantly, there needs to be more on-line documentation, especially since some of the conventions used in ROSI are new to engineering students. In fact, there is almost NO documentation for both the front end and the back end, which makes it very difficult for both students and faculty programmers/staff to use ROSI. For example, when checking course enrollment, the user is prompted for course code and section. In the past, this would mean ECE150S for course code, and L0102 as section. Instead, course code is now ECE150H1 and section is S. A small difference, but providing incorrect information multiple times will logoff a user automatically because of the security settings on ROSI. Another example is that when getting students' address information, the country field is a numerical field. In order to find what country does the number represent, one would have to look up a table at somewhere else in the repository. And this is not documented at all.

Another service problem involves the transcript service. Although it is possible to request a transcript through ROSI, once a transcript has been requested, the $8 transcript fee can't be paid with a credit card. Payment must be made in person, or by mailing a cheque. Currently, it takes longer to request a transcript through ROSI than through the University of Toronto Transcript Centre located at 100 St. George Street. While ROSI staff is working on a way to allow credit card payment, another option they should explore is to allow returning students to accumulate transcript fees on their account balance, the balance that includes tuition.

Despite these rough beginnings to the relationship, the introduction of an internet-accessible student information system at the University of Toronto is definitely a step in the right direction. Many other Ontario universities such as McMaster and Queen's have had an internet-accessible student information system for years, allowing their students to enroll in courses, change personal information, check results and financial information far away from school. These are all services offered by ROSI. Prior to the introduction of ROSI's services, University of Toronto students relied mainly on the Student Telephone Service (STS), a slow and cumbersome phone-in system with limited hours. While ROSI's Line is an upgraded version of STS, it is not much of an improvement in terms of usability. But with the introduction of ROSI's SWS, the hours of access have expanded. ROSI's staff hopes to provide ROSI's services around the clock in the near future.

So, even though you can't get to know all of ROSI yet, log onto the SWS and acquaint yourself with ROSI. Change your personal information and your password. Look around and see what is available. ROSI 's SWS is at http://www.rosi.utoronto.ca. ROSI's Line is (416) 872-ROSI. ❖

Unfulfilled need to work on a yearbook?

email changka@ecf

(That would be Karen. She's the editor.)

Skule™Book

# EngSci Building to be Demolished

continued from page 1

takes 36 to 42 months; now, [for CIT], it's down to 26 months." To meet the timing requirements, demolition of the Engineering Science building has been moved up to October 1999. Ground breaking for the new facility will follow one month later.

The last major renovation in Engineering occurred in the early 1990s, when several floors were added onto the Pratt building to accommodate faculty and graduate studies in the Materials Engineering and ECE programs. The last construction that directly benefited undergraduate students dates back to almost two decades ago, when the Sandford Fleming Building was refurbished after fire damage. ❖

## On the Move

The Professional Development Center office have moved from the Galbraith Building to 229 College Street, 4th floor (just east of Spadina Avenue). This space was previously occupied by the Department of Sociology.

The Engineering Science undergraduate office and common room will move to the Haultain Building, 3rd floor.

ECE research labs, previously in the Engineering Science building, will also relocate to Haultain.

make merry
all F! week long.

SUDS – the U of T Engineering Pub

Opens every day of F!rosh week at 3:00
Open every Friday nite during the Skule™ year

# clubs

## Indy Textbook Swap

ELFREDA LAU – INDY CLUB CHAIR

The Indy club will be holding its first TEXTBOOK SWAP smoker on Friday, September 10, 1999 from noon to 2pm. We will be selling cheap (as in inexpensive!) pizza and pop and you'll be able to buy CHEAP USED TEXTBOOKS from your upper year classmates. You will also get the chance to win a $75 gift certificate for UNITEXT just by being there (No purchases necessary, just come on down to the Indy club common room for your chance to win!).

Frosh, here's a chance to come on out and meet some upper years, hang out and play some foosball in the Indy Common Room. Don't forget to bring money to buy used (but kindly treated) books! For you upper years, be sure to bring your used textbooks to the smoker that day. It'll be a chance to catch up on summer tales and to sell your books from previous years, so you can afford your new books for the coming year. The only thing to look out for is the new textbook list. As soon as the Indy club can get their hands on this, we'll mass email it to all the upper years to let you know which books to bring. So come on down on September 10th between noon-2pm in the newly painted (yes, it's now all done!) Indy common room in the basement of the Rosebrugh building. There will be signs directing you to the common room when you enter the building. Have a great Frosh week! ❖

## EngScis Move to Haultain

CAROLYN LAM – ENGSCI CLUB CHAIR

Welcome to the 1999-2000 school year! We have a fun year planned, including a house-warming event in October for our common room on Haultain Building's third floor. Yes, this means we are moving! Appreciate your last month at the Engineering Science Building. It is going to be gone in October. 0T2's and 0T3's will get to enjoy the new Centre of Information Technology, where Engineering Science will be relocated (first floor).

The Eng. Sci. Club will continue to offer helpful past course material, a cozy common room to chill or ask for help, action-packed athletic nites, ski and paintball trips, a fabulous dinner dance, fun-loving smokers, and more! Be in the know and check out our newsletter on www.ecf.utoronto.ca/~engclub or our calendars posted in the our common room. Our first event will be the BBQ smoker on September 15th located just outside of 40 St. George Street. I hope to see you all there! ❖

## CUBE

BY FRANCISCA OGUNDELE

If you are interested in "biomedical engineering" then the University of Toronto's Club for Undergraduate Biomedical Engineering is the club for you. We provide a wide range of information, services, and activities for Uof T students who are curious about biomedical engineering or bioengineering. CUBE can provide: Biomedical engineering/bioengineering job postings; Graduate Program Information; Guest Speakers; Hospital and Industry Tours.

One of our most successful CUBE events is our Annual Wine & Cheese. The Wine & Cheese, which is happening on November 9, 1999, gives both students and professors the opportunity to network with each other and with individuals working in biomedical engineering related industries.

CUBE has an international flair. In 1998 we sent a group of students as University of Toronto delegates to the 1998 Biomedical Engineering Society (BMES) Conference in Cleveland, Ohio. Plans are in place to send a small CUBE delegation to the 1999 joint BMES/EMBS (Engineering in Medicine and Biology Society) Conference in Atlanta, Georgia from October 13-17.

Despite the name, CUBE is a multidisciplinary campus club composed of students from engineering, basic medical sciences, arts, etc. We have an executive council headed by our President, Carolyn Lam and supported by eight Vice-Presidents. We are also expanding to other universities with satellite chapters at Queens University, the University of Alberta, the University of Calgary, and McMaster University.

Join us for our BBQ on September 16 and keep an eye out for out booth at the SAC Carnival also in September. To become a member, simply e-mail us your name, telephone number, academic program, and year of study and you will automatically be added to our e-mail listing and get updates on what CUBE is doing. ❖

cube@ecf.toronto.edu; http://www.ecf.toronto.edu/~cube

## Do you have *issues* with UNIX?

```
skule.ecf% email
email - Command not found
skule.ecf% quit
quit - Command not found
skule.ecf% what do I do now?
No match
```

Having trouble with UNIX? Do you want to know how to forward your email, or how to setup a web page? How about working on ECF from home?

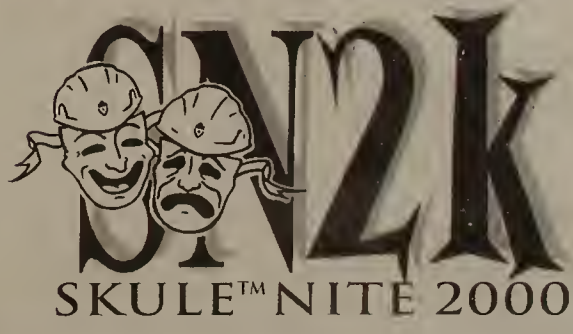
Visit a special Cannon online article at
http://www.ecf.utoronto.ca/~leventi/unixhelp.html

Just type "netscape" at the skule.ecf prompt!


Q: What is this *Skule™ Nite* that I keep hearing so much about?

A: A musical comedy revue produced by Engineering students. A cast of about 20 guys and gals perform sketch comedy, sing and dance for their own and others' amusement.

be part of the funniest show on campus:




SKULE™ NITE 2000

NO TALENT REQUIRED!

**Auditons** will be held in early **October**. Look for **signs** with further details. **Sign up to be involved in crew** to help with: lighting, sound, set/prop construction. To **get involved**, to get information and to get funky, email **skulenite@skule.ca** or visit **skulenite.skule.ca**.

# the back page

*Sean Voskamp, EngSoc Prez (the guy in the fireman's hardhat) feeds the hungry masses at Skule 'Daze 9T9. Interested in becoming a Skule 'Daze leeder? Miscellaneous propaganda coming soon...*

$48,042.00

pledged by the Class of 9T9.

(that's GRAD*itude* for ya!)

## Engineering: A Lifestyle

BY WENDY TAM

I remember that on the last day of classes in the spring term, I had a Materials Science lecture at 9 AM. The night before I was contemplating on whether I should skip. This was partly because I felt that the professor was not too helpful, and partly because I was very tired and wanted to sleep in. In the end, I decided to go; perhaps he would summarize the course which would help in studying for the final exam. However, during the lecture he didn't summarize the course, but instead talked about Engineering in general. I didn't have too much respect for him up to that point, but after his concluding lecture, my opinion of him changed.

One thing that I really admired about him is that he stressed the fact that if you fail in Engineering, it doesn't mean that you're a failure in life. I think that it's incredibly rare to find such a multi-dimensional professor. He actually considers students as human beings with lives and feelings, not just bodies sitting in a lecture hall whom will write final exams for him to mark at the end of the course. He said that Engineering is a lifestyle, and that if you don't enjoy what you're doing at the moment, perhaps you shouldn't be studying Engineering in the first place. On the other hand, my Statics professor in first term had a different opinion. While discussing the midterm averages, she stated if you got a really low mark, then perhaps you should reconsider your decision of studying Engineering.

It's interesting to note how one professor thinks interest and enjoyment should be the deciding factor in whether to continue with Engineering, whereas the other considers ability to be the supreme indicator. Both are equally important, but to me as a student, it's rather obvious which perspective is more encouraging and meaningful in the long-term context. If one happens to get a really low mark despite hard work and long hours of studying, does that mean he/she won't make it in Engineering? There's always the possibility, but the mindset that "if you get low marks then maybe you shouldn't be in Engineering" is far from motivating.

I'm not saying that one should be in denial of the possibility of failure, but one's choice of perspective can make a world of difference. Life is not comprised of numbers alone. In our "enlightening" first year *Engineering, Society & Environment* course we learned that GDP is an inaccurate measurement of the state of society because it fails to account for things like community work, quality family time, et cetera; in other words, things that cannot be quantitatively measured. Aren't marks a somewhat similar case? Don't effort, interest, enjoyment and the overall attitude towards learning count for anything? It all boils down to *numbers* again. I don't dislike numbers themselves, but I don't like it when people consider numbers to be the definitive way to "measure" or "evaluate" people. One of my favourite quotes is from Albert Einstein, who said: "Not all things that count can be counted, and not all things that can be counted, count."

If only everyone could appreciate Einstein's point of view. That's why I really liked my Materials Professor's interpretation of Engineering - a lifestyle. A healthy lifestyle is balanced: it doesn't overemphasize one aspect of life, nor does it neglect the immeasurable things that make life worth living in the first place. ❖

## emails

Date: Sun, 27 Jun 1999 09:28:47 -0400
From: Dan Popadynec
<opatop@hotmail.com>
To: cannon@skule.ca
Subject: First issue article idea.....

Hey Jean! Although I've just graduated, I would really like to contribute to the first edition of d'cannon. Let me try 'n hook you into my idea.... This is the story of two recent grads now living in Dublin, Ireland: Me (Dan Popadynec) CIV 9T8+1 (PEY) and Chisco Ruiz CIV 9T8. The point of the story is to show present students that anything is possible and that there are a tonne of living/job options available abroad. Also, to illustrate how EASY and FUN the experience can be.

My story: Right after my last exam two months ago, I went over to Europe to travel and to work the summer in Ireland through the work abroad program. My initial plan was to get a pub job and have some fun (since I wasn't all that set on joining the REAL world just yet). Also, I was discouraged by the Canadian job market (multiple "stressful" interviews, aptitude tests, etc. and competing against my friends for a single placement). So SWAP (Student Work Abroad Program) easily set me up with a one-year Irish work permit and I was off. When I got here, I realized a couple of things quickly... 1. Pub jobs are NOT glamorous and well-paying. 2. There are TONNES of Engineering jobs that go unfilled in Europe (especially Ireland: here is an employee's job market). For instance, the yellow pages has over 30 pages of Recruitment companies whose sole purpose is to find jobs (free of charge for the employee) for hot commodities like Canadian graduate engineers. The short of it: I got an extremely well paying Engineering job within 3 days of arriving (the term "stressful interview" does not exist here)! Every interview I had led to a job offer within 15 minutes of sitting down. Actually, within 5 days of looking, I had 6 engineering offers (all within my field of interest). I'm NOT overly qualified, computer-skilled or a genius. Now, I'm settled with a great job, classy apartment, new friends and Guiness beer. It's SO much fun living and working here. My company wants me to stay and work here as long as I want and have pledged to do all the paperwork to keep me here legally. I might just do that...

Chisco's story: After graduating in May 9T8, Chisco worked a few typical-lousy engineering jobs in Toronto before getting overly frustrated. Through the internet, he researched grad programs in European universities (and without high grades, GMAT scores or even a one-on-one interview), he was accepted and economically sponsored (a.k.a. given cash) into a number of programs in a number of top schools. He decided to move to Dublin and enter a graduate program in Civil Engineering at the prestigious University College Dublin. He tells me: the attitude at school is typical European (work hard but relax and enjoy life). We are both having a blast! ❖

## Orientation Week Schedule

**Tuesday, September 7th**

| | |
|---|---|
| 8:00 a.m. | F!rosh arrive outside Con Hall |
| 9:00 a.m. | Con Hall welcome |
| 11:00 a.m. | F!rosh Olympics |
| 12:00 p.m. | Campus Tour/Arm Dying/ Assorted Mayhem |
| 3:00 p.m. | F!rosh Picture |
| 4:00 p.m. | Downtown Madness |
| 6:00 p.m. | SUDS |
| 8:00 p.m. | 1st TPT Tutorial |

**Wednesday, September 8th**

| | |
|---|---|
| 8:00 a.m. | 2nd TPT Tutorial |
| 9:00 a.m. | EPT/TPT |
| 11:00 a.m. | Orientation Session in Con Hall |
| 12:00 p.m. | Lunch Charity Event |
| 4:30 p.m. | SUDS, F!rosh Nite Warm Up |
| 9:00 p.m. | F!rosh Nite |

**Thursday, September 9th**

| | |
|---|---|
| 9:00 a.m. | Classes Start |
| 12:00 p.m. | Departmental Lunch, Classes Cancelled |
| 2:00 p.m. | Student Issues Committee Wine and Cheese |
| 3:00 p.m. | SUDS |

**Friday, September 10th**

| | |
|---|---|
| 12:00 p.m. | SAC Street Party |
| 3:00 p.m. | SUDS |
| 4:00 p.m. | 1st Bus to Hart House Farm |
| 5:00 p.m. | 2nd Bus to Hart House Farm |

**Saturday, September 11th**

| | |
|---|---|
| 12:00 p.m. | Leave Hart House Farm for U of T |
| 6:00 p.m. | SUDS and BBQ outside SF |
| 8:00 p.m. | Scavenger Hunt |

join the cannon.

cannon@skule.ca